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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/778,558 | 02/07/2001 | Pang-Chia Lu | 10251 | 4395 |

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EXAMINER

DICUS, TAMRA

| | |
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| ART UNIT | PAPER NUMBER |
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1774

DATE MAILED: 02/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/778,558

Applicant(s)

LU ET AL.

Examiner

Tamra L. Dicus

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 December 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Prosecution is reopened and this Office Action will be considered non-final.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-5 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over US PUBLICATION 2001/0016248 A1 to Alderfer et al. in view of USPN 6,379,780 to Laney et al.

Alderfer teaches a printing sheet comprising an extruded microporous film having a meshed network of interconnecting porous from 35 to 95 percent void volume (content) containing HDPE at [0003]-[0005]. The sheet has a coating on it and comprises calcium carbonate joined to at least one side of the microporous material at [003], [0022], [0024], and [0051]. The sheet is suited for ink jet printing, which means the method for applying ink to such a sheet is taught. See [0002]. That the film is porous from one surface to the other surface is inherent to a microporous sheet.

That the film is treated with plasma is a process limitation in a product claim. Product-by-process claims are not limited to the manipulations of the recited steps, only the structure implied by the steps. Patentability of an article depends on the article itself and not the method used to produce it (see MPEP 2113). Furthermore, the invention defined by a product-by-process invention is a product NOT a process. *In re Bridgeford*, 357 F. 2d 679. It is the patentability of

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the product claimed and NOT of the recited process steps which must be established. *In re Brown*, 459 F. 2d 531.

Alderfer does not teach per se the interconnecting voids have "an open celled structure". However, Laney teaches a permeable surface imaging support containing microbeads with a void space of at least 40% having interconnected or open-celled structure (equivalent to ink-receiving porous open-celled structured void layer) at col. 11, lines 6-13 for the purpose of providing improved ink absorption (same reason as Applicant). Hence, it would have been obvious to one of ordinary skill in the art to modify the sheet of Alderfer to include open cells in voids for the purpose of improving ink absorption as taught by Laney.

3. Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over US PUBLICATION 2001/0016248 A1 to Alderfer et al. in view of USPN 6,379,780 to Laney et al. and USPN 6,087,079 to Newberry et al.

Alderfer is relied upon above. Alderfer does not teach a three-layer film as instant claim 6 recites. Newberry shows a photographic imaging element comprising a paper substrate and at least two extruded biaxially oriented HDPE sheets which comprise a core layer, surface layer, and skin layers (core, extruded and skin layers) (instant claim 6 see Abstract). See col. 6, lines 1-10 and lines 40-68. It would have been obvious to one of ordinary skill in the art to include outer extruded layers surrounding the core of Alderfer because Newberry provides such a three-layer film for the purpose of providing various functionalities such as antistatic or tinted properties or for strength as Newberry teaches at col. 6, lines 40-68. Newberry shows that ink can be applied to the imaging element via ink jet printing (col. 13, lines 5-25).

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Alderfer does not provide for a nonporous skin layer. Newberry shows voids (pores) in the HDPE sheets wherein the voids are oriented so that there is alignment with the machine and transverse and machine directions of the sheet (col. 4, lines 20-37), which is equivalent to the voids being porous in a direction perpendicular to the plane of the film, the film is porous from one surface to the other surface and is in a direction perpendicular to the plane of the film. Newberry further produced a nonvoided skin layer (nonporous) at col. 5, lines 66-67. It would have been obvious to one of ordinary skill in the art to include a nonporous skin layer as Newberry teaches the conventionality of doing so improving tensile strength making the sheet more manufacturable as Newberry explains at col. 6, lines 64-68.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over US PUBLICATION 2001/0016248 A1 to Alderfer et al. in view of USPN 6,379,780 to Laney et al., USPN 6,087,079 to Newberry et al., and USPN 6,028,028 to Nitta.

Alderfer is relied upon above. While Alderfer teaches ink jet inks are used on the sheet, Alderfer does not specify a water-based ink. The invention of Nitta is to a recording sheet. The sheet can be a multilayered biaxially oriented sheet of various additives and polymers. The ink jet ink is water-based (see abstract and col. 8, line 37.) It would have been obvious to one of ordinary skill in the art to include a water-based ink because Nitta teaches the conventionality of using such inks in recorded media.

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Response to Arguments

4. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Newberry is still used in the rejection to provide for the multilayer structure and skin layer make-up. Alderfer is still used in the rejection to provide interconnecting porous voids at [0002]-[0005], and also network mesh as instantly claimed. Laney is still used in the rejection to provide the open-celled structure type of interconnected cells. All are analogous art as both involve printing techniques for recorded media.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. USPN 6,183,856 to Amon teaches opaque polymeric films with voids.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tamra L. Dicus whose telephone number is 571-272-1519. The examiner can normally be reached on Monday-Friday, 7:00-4:30 p.m., alternate Fridays. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Cynthia Kelly